

CLAIMS

1. An electrical connector, comprising:

an insulative housing having an upstanding body, having a lower printed circuit receiving face and a mating face, said mating face comprising upper and lower printed circuit card receiving slots, said receiving slots extending horizontally across said face, and being positioned one above the other; and

a terminal array comprised of a stamped lead frame overmolded with a web of plastic material, each said array comprising:

upper and lower terminals pairs, with an upper pair comprised of cantilever beam contacts flanking said upper printed circuit card receiving slot, and a lower pair comprised of cantilever beam contacts flanking said lower printed circuit card receiving slot;

said terminals within said pairs being positioned proximate each other, and said pairs being spaced apart from each other by a vertical spacing;

each said terminal of said lower pair having an intermediate portion transitioning into a printed circuit board portion; and

each said terminal of said upper pair having an intermediate portion transitioning into an extension portion, and then into said printed circuit board portion.

2. The connector of claim 1, wherein said housing includes upper and lower extensions which extend from a body portion of said connector housing to said front mating face, said upper and lower printed circuit card receiving slots being positioned in respective upper and lower extensions.
3. The connector of claim 2, wherein said body portion defines a recessed face, intermediate said upper and lower extensions.
4. The connector of claim 3, wherein said overmolded web of material is substantially rectangular in configuration, having a front vertical edge positioned with said upper and lower pair of cantilevered beam contacts extending outwardly from said front edge, and a lower horizontal edge having said printed circuit board contacts extending outwardly therefrom.
5. The connector of claim 4, wherein said cantilever beam contacts of said upper and lower pairs are laterally staggered relative to each other, and extend laterally staggered over said upper and lower printed circuit card receiving slots.
6. The connector of claim 4, further comprising a locking tab overmolded in said web of material, said locking tab being positioned in said vertical spacing, and extends outwardly from said front edge thereof, said locking tab engaging a slot in said recessed face of said housing.

7. The connector of claim 6, wherein said locking tab is formed from the same material as said stamped lead frame, but is stamped free from said terminals.

8. The connector of claim 4, wherein said housing includes a cavity behind said recessed face and said upper and lower extensions, to receive a plurality of stacked terminal arrays.

9. The connector of claim 8, wherein each said overmolded web of material includes substantially planar side surfaces, to allow the stacking of said terminal arrays.

10. The connector of claim 9, further comprising cooperative aligning elements on adjacent stacked terminal arrays.

11. The connector of claim 10, wherein said cooperative elements are defined by a cooperative dovetail being positioned on said adjacent stacked terminal arrays, which are received in receiving slots formed on an upper surface of said cavity.

12. An electrical connector assembly, comprising:

a shielding cage comprised of a plurality of ports defined in an array of a plurality of rows and columns, said shielding cage having a front mating face, side walls, a top wall, a rear wall, and a partially extending lower wall and intermediate wall, forming a communication opening between a column of vertical ports; and

an electrical connector, comprising an insulative housing having an upstanding body, said electrical connector being receivable in said communication opening and having a lower printed circuit receiving face and a mating face, said mating facing comprising upper and lower printed circuit card receiving slots, said receiving slots extending horizontally across said face, and being positioned one above the other, and each being generally aligned with one of said ports in said column, and a plurality of terminals defined in an array, with each said array comprising upper and lower terminals pairs, with an upper pair comprised of cantilever beam contacts flanking said upper printed circuit card receiving slot, and a lower pair comprised of cantilever beam contacts flanking said lower printed circuit card receiving slot.

13. The connector assembly of claim 12, further comprising a plurality of pluggable modules, receivable in at least some of said ports, said module having a printed circuit card adjacent a pluggable end of said modules and being positionable with said slots and engageable with said terminal pairs, and an interface connector at a front end, said interface connector being accessible through said port when said module is plugged in, said interface

connector and said printed circuit card being electrically interconnected.

14. The connector assembly of claim 13, wherein said shielding cage includes adjacent said front mating face, tabs having latching openings therein, and said modules have complementary latching embossments for engagement with said openings for latching said modules in place.

15. The connector assembly of claim 12, wherein said a terminal array is comprised of a stamped lead frame overmolded with a web of plastic material, each said array comprising upper and lower terminals pairs, with an upper pair comprised of cantilever beam contacts flanking said upper printed circuit card receiving slot, and a lower pair comprised of cantilever beam contacts flanking said lower printed circuit card receiving slot.

16. The connector assembly of claim 15, wherein said terminals within said pairs are positioned proximate each other, and said pairs being spaced apart from each other by a vertical spacing, and each said terminal of said lower pair having an intermediate portion transitioning into a printed circuit board portion; and each said terminal of said upper pair having an intermediate portion transitioning into an extension portion, and then into said printed circuit board portion.

17. The connector assembly of claim 15, wherein said housing includes upper and lower extensions which extend from a body portion of said connector housing to said front mating face, said upper and lower printed circuit card receiving slots being positioned in respective upper and lower extensions.

18. The connector assembly of claim 17, wherein said body portion defines a recessed face, intermediate said upper and lower extensions.

19. The connector assembly of claim 18, wherein said overmolded web of material is substantially rectangular in configuration, having a front vertical edge positioned with said upper and lower pair of cantilevered beam contacts extending outwardly from said front edge, and a lower horizontal edge having said printed circuit board contacts extending outwardly therefrom.

20. The connector assembly of claim 19, wherein said cantilever beam contacts of said upper and lower pairs are laterally staggered relative to each other, and extend laterally staggered over said upper and lower printed circuit card receiving slots.

21. The connector assembly of claim 20, further comprising a locking tab overmolded in said web of material, said locking tab being positioned in said vertical spacing, and extends outwardly from said front edge thereof, said locking tab engaging a slot in said recessed face of said housing.

22. The connector assembly of claim 21, wherein said locking tab is formed from the same material as said stamped lead frame, but is stamped free from said terminals.

23. The connector assembly of claim 22, wherein said housing includes an cavity behind said recessed face and said upper and lower extensions, to receive a plurality of stacked terminal arrays.

24. The connector assembly of claim 23, wherein each said overmolded web of material includes substantially planar side surfaces, to allow the stacking of said terminal arrays.

25. The connector assembly of claim 24 further comprising cooperative aligning elements on adjacent stacked terminal arrays.

26. The connector assembly of claim 25, wherein said cooperative elements are defined by a cooperative dovetail being positioned on said adjacent stacked terminal arrays, which are received in receiving slots formed on an upper surface of said cavity.